

Clay firm aids jobless with comms venture

by Donald Kennett
IN an unusual foray into the communications industry, English Clay, best known for its quarrying, has started a joint venture with US company Western Union. A company will be formed to launch a range of new communications services in the UK over the next few years.

Like several other employers, notably Pilkington Glass in Lancashire, ECC finds itself the dominant employer in its community. Faced with declining manpower requirements at a time of generally rising unemployment, ECC set up a Local Enterprise Trust to ease the problems this has caused.

Planning chief Dr Terry Tharncroft said the company had always been indirectly interested in communications, because of its remote location and its connection with the paper industry. Most of ECC's output goes into cartons to make paper easier to print on.

In looking for business which could use the space and people available in the area, the opportunities opened up by the British Telecommunications Act and trends to working in remote locations were an obvious direction, he said.

ECC's first investigations were into voice services based on the Delta communications processor from the US. But the demise of Nexus, which was handling it in the UK, has been a setback. Other investigations with radio-telephone messaging company Air Call and with the British Technology Group are continuing.

ECC has now put up £100,000 for a 20% stake in Western Union Global Information Services, the joint venture which will be run primarily by WU.

It will spawn a whole series of separate operating companies to provide copies of WU's services in the US, nationally at first and then internationally, followed by a variety of other new services made possible by high technology and liberalisation in telecommunications.

The first service to go live is WU Priority Mail, in which a standard letter is merged with a personalised message and labelled from a mailing list. This is similar to the Post Office's Electronic Post service, started in London and Manchester last year.

Links have already been set up with this service for the first two mail shots — for the Department of Industry's Information Technology Year campaign and for ECC subsidiary Haven Holidays.

Based on computer facilities offered by its ICL 2956 and three ME29s, the group aims to build up to a part-time workforce of 350 over the next five years. It currently employs six.

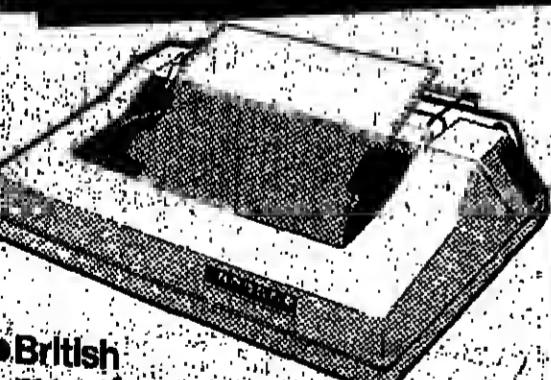
David Craver adds: As a potential site for overseas investment in the electronics industry, the UK comes out top of the table in a survey of US companies.

But a withdrawal from the Common Market would change the outlook considerably, with nearly half of those now making the UK their first choice saying that leaving the European Community would make this country unsuitable.

The survey, by the organisation Electronics Location File, also shows a remarkable buoyancy within the US electronics industry, and of the 500 companies questioned, more than one in three has plans to establish overseas operations by 1985.

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NEWS BRIEFS

GLC spend £3m to speed fire calls

THE Greater London Council spending over £3 million on a computer system expected to halve mobilisation time of its fire units on average two minutes.

The computer, which will be installed by the mid-1980s, made by Marconi Space and Defence Systems, and will be programmed with a menu system in London, as well as data on the ability of appliances, crew equipment.

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But the company's claims have been rebuked by both NAS and Magnuson.

John Curran, newly-appointed vice president for European marketing at NAS, says his company is nudging Amada in market share. "We are higher in terms of units installed, equal in revenue terms, though lower in nips (million instructions per second) installed in Europe than Amada."

Curran's careful definitions of market share include a nips rating as a way of comparing companies which supply different numbers of units with different processing power.

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"We have a total installed base of 219 units, the largest out of any PCM in Europe, representing more than 400 mips. We grew by

60% in 1981 and installed 51 units of which 27 were NAS machines and 24 were Hitachi. We also increased our UK installed base by 50% from 17 to 25 units."

Mike Tucker, Magnuson's managing director, claims that his company's installed base also exceeds that of Olivetti. In a letter this week, he quotes a Nephos survey which puts Amada market share at 45.5%, NAS at 35.5%, Magnuson at 18%, Olivetti at 7%, and BASF at 4%.

For the time being, however, most observers seem to be cautiously waiting and watching to see what happens in the wake of the settlement of the anti-trust suit, which came to a sudden, unexpected termination on January 8.

And now Justice Harold Greene

PCMs in market share row

by Boris Sedacce

PLUG compatible mainframe manufacturers are becoming increasingly edgy about their relative market shares as they try to convince users of their viability as alternative suppliers to IBM.

Claims by Olivetti last year that it is number two to Amada among European PCMs have produced a flood of statistics from its rivals. Now National Advanced Systems claims to be in second slot by some measures and ahead of Amada on others in the increasingly tough fight to establish a permanent presence among European PCMs.

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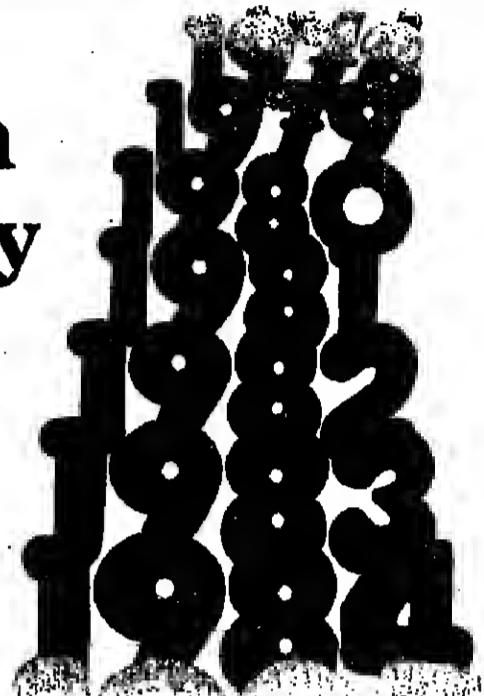
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'Cheap local net has edge on faster systems'

by Donald Kennett

FOR some time to come, low-speed local area networks will grab sales in preference to the higher performance systems such as Ethernet and the Cambridge ring.

This is the view of John Grant, technical director of Cambridge-based design consultancy Nine Tiles Information Handling which has announced a local networking ring designed to support communications between computers and terminals at up to 19.2 Kbps per second.

The ring, called Multilink, operates on a single twisted-pair cable, carrying data at 250 Kbps, and users' equipment is connected to it via RS232 interfaces.

Grant believes that the price of about £300 per network interface will give the ring a significant advantage over the much-publicised but expensive systems, while the data rate of 250 Kbps will support a large number of applications for links between terminals and computers.

Grant is lining up subcontract manufacture and distribution deals aimed at having the first systems available by the end of March. Development plans include building a library of routines to run on a variety of attached microcomputers, a filestore implemented on a micro (with a hard disc and a high-speed parallel interface to the network code) and a software system which will support online sales.

Ferranti to market gate array designer

by Robert Parry

FORTY man-years of effort developing dedicated software for the design and testing of uncommitted logic arrays or gate arrays is to be made available by Ferranti to its customers.

Gate arrays like Ferranti's ULA families provide an increasingly popular route to LSI and VLSI circuits. As the devices become more complex they need more refined CAD tools to design the interconnection that allows the array of logic gates to carry out the required functions.

For an entry price of £37,500, Ferranti's ULA Designer gives complete control over ULA designs right up to manufacture in customers' own premises, while taking advantage of Ferranti's established design software. It is claimed to be the first CAD system designed specifically for the design of gate array circuits.

Hardware is based on a DRC PDP-11/23 minicomputer through telephone lines, under DRCnet control, to host computers at Ferranti's Manchester microelectronic design centre or in Scott's Valley, California.

Software allows entry of logic diagrams and cell layouts via a display.

DOWN . . . Ferranti has 30% of world market in ULAs.

We are not completely certain how many of these systems we will sell," said marketing director Bryan Down, "but we estimate sales of 15 to 20 systems in Western Europe, with a larger number likely in the US."

Ferranti sees ULAs as the main part of its business and estimates it has 30% of the world market.



order input while producing invoices and packing documents at the same time.

Call set-up and data transfer routines have been running in micros including an Apple II, a Zilog MC2, a Newbury Newbrain and a Transam Triton to demonstrate the prototype.

Grant contests the argument that says a 10-Mbps rate is necessary to serve enough applications to stimulate high volume, and therefore cheap production.

"There is plenty of volume at our level of capability," he says. "I am not sure that standards on the ring are so important either, so long as you can make a low-cost device."

"It is in the conversation between the station which sets up the call and the device it is calling that there is a hole in the standards."

"Provided we get enough systems out in the field, we will see a de facto standard there. As we were involved in the production of the Basic language used on the Sinclair ZX80 and ZX81, our software is used by more people than anyone else's. And ICL is talking about making it their standard Basic."

As volume production and the use of integrated circuits bring down the costs of Ethernet, the costs of Multilink should come down too, he adds. "There is quite a lot of circuitry we could put in a ULA. The Americans have done a great deal of talking, but not much in practice."

by Maggie McLean

BRADFORD University Software Services, BUSS, a company formed by the university to market an internally developed graph plotting package, is now funding itself from sales. Consisting of ex-full time university staff, the company is led by David Butland, manager of the Simpleplot project, who describes himself as a "sort of director." "The university is quite pleased to be shedding staff, and at the same time doing something of

value to industry," he explained. Simpleplot Mark 2 offers two-dimensional graph drawing facilities including linear logarithmic and normal probability scales, histograms, and plotting of polynomial functions. It runs on any system offering standard Fortran IV and will drive any graphic device.

A Pascal version, Psimpleplot, has also been developed, and BUSS is setting it up on ICL's Pico system.

The price of Psimpleplot is expected to be slightly more than Simpleplot, which costs £900 including one year's maintenance.

Varsity sets up in business

by Maggie McLean

A USERS' group has been formed for companies with Micro Communications word and data processing systems. Founding members are Anthony Platt, assistant registrar of the University of Essex, (0206 862286), and Ronald Watson, solicitor of Bedford-based Conquest Court & Binns (0234 56611). More than half of the nearly 200 users in the UK are said to have expressed interest in joining.

market the product in Japan. There are currently 120 UK installations with Simpleplot, including British Leyland, the Wellcome Foundation and several local county councils and water authorities.

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New user group

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Perq printer

A GRAPHICS printer for the workstation in available following the announcement by the Three Rivers Corp that its interface has been developed. It will manufacture and distribute the Perq in the UK. The desktop plain paper printer is priced in the US at \$15,000.

More minis

TEXAS Instruments has extended the high end of its DS5990 range of minicomputers with three new models -- the Models 16, 25 and 36 which use the DS80 and DS88 high-speed, large-capacity removable disc drives, with storage capacities of 141,890, 157,320 and 167,000 respectively.

Net processor

ADVANCED Computer Techniques Corp (ACT) has announced a network processor based on a Honeywell Level 6 minicomputer which may be configured as a remote concentrator, cluster controller or message switch, and may serve as a node for a distributed computing system.

Oil system

OIL refineries owned by Esso, Amoco, Gulf and Texaco are now using a planning and scheduling system from Scicon Computer Services, a subsidiary of BP. Offered on either a service bureau basis or to run on a user's own computer, the system is written in Fortran for IBM 3033 equipment.

The report finds that small firms are "marginal employers, employing marginal labour often in marginal economic activities dominated by large enterprises." As such, they are expected to have little effect on unemployment caused by new technology.

Beyond Generalisation, Department of Town Planning, South Bank Polytechnic, Wandsworth Road, London SW1 2JZ, 20 pages, £2.00.

Name change

TYLIN PEOPLE, the Tate & Lyle subsidiary which supplies contract computer staff to DfT departments in the group and to outside companies, has been re-named TLP. TLP is what is left of Tylin Management Systems, the Tate & Lyle computer business which was sold to LA Computer Services.

Early retirement hope 'wishes thinking'

by David Craver

THE debate on the implications of technological change -- which has put forward early retirement, a shorter working week, the creation of smaller firms, and a shift of resources to the service sector as solutions to technology's social and employment consequences -- has been filled with "wishes thinking" according to a report published by the Town Planning Department of South Bank Polytechnic.

In addition, it suggests that in four of the elderly live in or near the poverty line. For an early retirement to be effective, a large increase in pensions would probably be necessary.

The report also finds no evidence that shorter working weeks have been responsible for job creation. But it does suggest that a shorter working week, by reducing overtime, would increase the number of "low paid" workers by half a million.

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Beyond Generalisation, Department of Town Planning, South Bank Polytechnic, Wandsworth Road, London SW1 2JZ, 20 pages, £2.00.

Seven programs introduced

THREE new microcomputers are catered for a range of packages from Systematics International Microsystems. The suite of programs, called Financial Controller, consists of seven programs.

The package is written entirely in Pascal -- unusual in a suite of business applications.

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E45	TALLY 1612 REC
E45	TELTYPE 30
E45	DIABLO 1450/40

£100 deposit for 2 years rental

NEWS BRIEF

NatSemi profits slump

NATIONAL Semiconductor, one of the largest US makers of chips and integrated circuits, has broken even in the last quarter, but \$1.2 million in the six months ended in December from about \$3.0 million in the corresponding six-month period of 1981. Future prices and the strong dollar are blamed.

First turnkey

WATFORD-BASED business Hooper Systems and Technology has sold its first turnkey system in £88,000 sales order process and stock control system based on a Prime 2502, to Imra Precision Controls to speed the handling of its 5,000-line product range.

Graphics for less than £200

MICROCOMPUTERS can now have graphics features previously associated with costly peripherals for less than £200, according to robotics research and development company Robocom of London.

A hardware and software system, known as Bit Stik, lets microcomputer users create multi-colour graphics quickly and easily on a 48K Apple II. A menu, from which items are selected using a three-axis controller, gives automatic lines, arcs and circles in six colours and four types of text.

Text can be positioned at any scale, angle or colour in the drawing.

Interface modules and modified software are being prepared for other microcomputers and pre-drawn symbols, cover common drawing applications such as electronics, architecture and typography, will be available on disc.

MICRO NEWS

EEC to provide £24 million for R&D projects

by Boris Sedlacek

THE European Community is inviting proposals for research and development projects into microelectronics from companies in member States, and will provide support worth £24 million for 1982, the first year of the scheme, which will extend over four years.

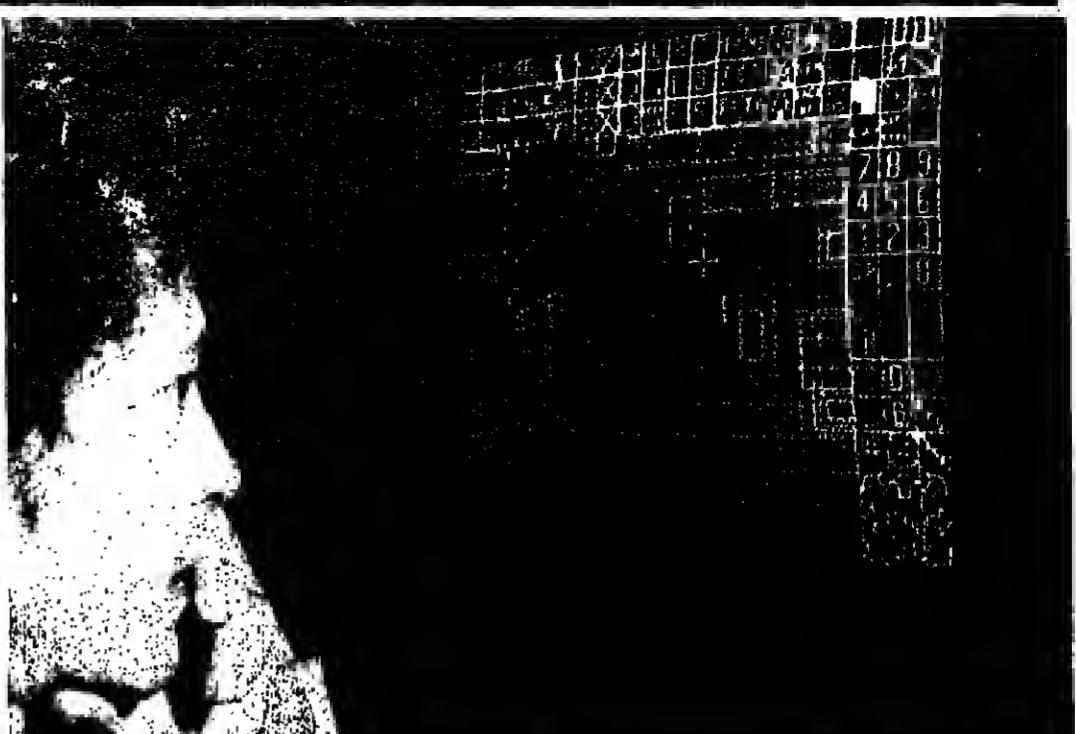
Projects eligible for aid are direct optical stepping technology, electron beam direct writing on wafers, plasma etching, testing equipment for integrated circuits and computer-aided design for very large scale integration.

The European Commission appears concerned that it will be left out of these advanced fields of technology. It relies on imports to provide 80% of a European market for integrated circuits worth about £800 million a year, which means that existing European producers are not big enough to put up the necessary level of investment to be granted.

The European Parliament in Strasbourg originally earmarked £30 million for the first year of the scheme with the possibility of member States contributing a further £10 million, but no indication has now been given that the full £60 million will be provided.

A spokeswoman for the DoE will not comment on expenditure plans beyond the £24 million committed for the first year.

The European Commission hopes to raise the member States' share of the world production of integrated circuits to 12% by 1985 -- still well below expected European demand, but representing a total sales increase of more than £1,000 million.



Computer aided design for very large scale integration is among the areas earmarked for support by the EEC.

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First market

EDUCATION is to be the first market sector to be attacked by Positron Computers of Haydock, Lancashire, with its British-built Positron 9000 microcomputer.

Marketing to educational users will be handled exclusively by Positron's first distributor, Griffen and George, a leading supplier of scientific equipment for education.

"We are very pleased that Griffen has chosen the Positron as the micro of resources behind the promotion," said Peter Lotus, Positron's marketing director.

He adds that Positron is looking for similar associations in other market sectors.

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SUTTON

Monday 1st February

Tuesday 2nd February

Wednesday 3

How audio-visual kit can 'liberate' tongue-tied students of technology

ONE of the many skills a systems analyst needs to acquire in order to do his job properly is an ability to communicate both with people within the DP department — programmers and operators — and with those outside it, such as users and providers of information, and those unconnected with the company, including consultants and hardware and software manufacturers.

Written communication takes many forms, including report writing, letters, papers, operating instructions, job specifications, system specifications, contracts, and appreciations of equipment and packages.

Oral communication is far more difficult, as it requires more interaction and flexibility on the part of the communicator, whether he is talking on the telephone, interviewing a user, presenting a new system, explaining a point to a programmer, or answering questions. It also presents problems to those trying to teach oral communication techniques in that students often believe that their appearance and delivery are quite different from what we perceive them to be.

To try to overcome this problem at City University have built into our MSc and Diploma syllabi a large element of communications work using audio-visual techniques.

We use these techniques primarily for interviewing exercises. We start the year by asking each student to talk on his subject for five minutes, and by filming the result on video. This has several advantages: students see and hear themselves, often for the first time, without the additional problem of having to interact with someone else; we often discover that students who may be tongue-tied on a technical subject are fluent and interesting about a

FOCUS

Keep them happy

AN executive of ITT World Communications is reported as having suggested that DPMs devote more time acquiring the latest technology than to the needs of their staff. Whether this indicates that computer equipment is more troublesome and needs more care and attention than installation personnel was not made clear.

What is clear, however, is that many DPMs are worried about keeping their show on the road than keeping their team happy. If a member of the DPM team goes down, a replacement is not necessarily a case for urgent treatment. But if the mainframe or a peripheral ceases to function then remedial attention becomes a priority matter.

Shopfloor flows are more important than personnel flows. From the moment the DPM learnt that the warehouse manager's terminal is down and out, the DPM has to be cut and about. His action line takes in the DP and communication centres, auxiliary modems and multiplexers, circuit testers and fault diagnosis. Meanwhile, a replacement terminal is located and installed.

While all this troubleshooting is taking place, the DPM has little time to attend to such matters as DP personnel development and appraisal programs. As a result, he could find himself spending time and money in developing recruitment display ads.

Installation training programs should be as important as main-

hobby and this gives us something to build on — and it helps to overcome any awe of cameras that there may be.

We usually operate this session with two academic staff and about six students, and each session occupies an afternoon, so that as we use the studios for two afternoons a week and have about 30 students the whole exercise is completed within three weeks. We record all six students and then play them back, discussing each one as we go.

The next exercise is a initial interview with a user. We have a number of briefs prepared for the students giving short introductions to different imaginary interview situations, and one of us role-plays while another assesses the interview. These interviews are usually about 10-15 minutes, and students have to deal with a variety of situations — users who are hostile, or quiet and withdrawn, or overtly interested in the internal political effects of computerisation on their department, or perhaps ignorant, or just plain scared.

The interviews are assessed on how well the interviewer dealt with the situation and how flexible he was in adjusting his questions to the reality of the interviewee. We usually get through only four of these in an afternoon, so students have a lot of time to discuss any difficulties they encountered. On this playback students are frequently amazed to see that they were either glaring fiercely at one of their number because they felt he was overrunning his time, or staring idly out of the window while someone else was asking questions.

The next exercise is a fact-finding interview of 20 minutes. Students this time are assessed on their ability to obtain sufficient relevant information in the time allowed, and on their accuracy of recording it, as well as on personal

communication techniques. We have had several students who, faced with an interviewee determined not to be helpful, have resorted to threats — a mistake it is better to make in the studio than in a job situation! They have been appalled generally by the sight of their own aggression such a problem does not recur. For this exercise we work in groups of three students and two staff.

Several students, faced with an interviewee determined not to be helpful, have resorted to threats — a mistake it is better to make in the studio than in a job situation

We then have a group interview where several students are interviewing one person, and we see how they overcome the problems of overlap and omission, and how well they utilise the advantages of not having to take notes at the same time as asking questions. On this playback students are frequently amazed to see that they were either glaring fiercely at one of their number because they felt he was overrunning his time, or while someone else was asking questions.

The principal income that NEXUS was to have in its early years was from sales of the 2200. Yet this machine, first exhibited in April 1980, was not really ready for the market until November 1981.

All this time, while NEXUS was losing money, LOGICA was happily selling it, clapping NEXUS on a cost-plus basis for development.

The one thing GESTETNER was not prepared to countenance was getting itself into a similar position, and it made it clear from the start that it would have nothing to do with a new application, a chief programmer calling in a member of the



Marilyn Kennedy-McGregor lectures in systems analysis as part of the City University business systems analysis team.

The rescue that went wrong

WHEN the US Cavalry came charging over the hill in the last fight in the design and development of the film to rescue our beleaguered heroes, the one thing that is not supposed to happen is that the Cavalry turn around at the final moment and gallop away again.

That is what appeared to happen when Gestetner's takeover of NEXUS fell through at the last minute, leaving the State owned office systems company with no profits to sell and the prospect of certain death within a few weeks.

While the official fate of NEXUS and its 250 employees has yet to be announced by the British Technology Group, the transfer of the marketing rights for the 2200 word processor to ICL, and for the facsimile machines back to Muirhead deprives NEXUS of the bulk of its business and its reason for existing.

The students can then use the studios for any special techniques or situations they want to practise. Often, as the year draws to a close, they simulate job interviews.

What will happen to the other products, the Ricoh word processor and daisywheel printer and the Unicam shared-logic word processor, has yet to be worked out. So has the future of dealership agreements, guarantees, etc? We have almost nothing yet.

A final touch of fate was to the tragedy of NEXUS. In the Office of Fair Trading in January 1981 circulated copies of a contract with Logica to the other firms, asking whether compatibility clauses were unfair. I seemed to be blindingly aware that this was going to NEXUS' commercial selling point.

NEXUS were compensated by a lack of judgment, such as manufacturing the amount of time involved in converting the multiprocessor for use in systems, and giving selection guarantees, etc? We have almost nothing yet.

The cost of this sort of equipment is dropping all the time. A few years ago video cameras were only for professional use, and they were sensitive, unwieldy and expensive. Now small lightweight cameras are readily available for hundreds rather than thousands of pounds.

We think audio-visual techniques work. Certainly they do for us. We have extended our work in this area, at the request of students, into the undergraduate areas, and it regularly gets extremely high ratings from students on a learning medium.

The next exercise involves playing by students, not staff, who are merely assessing. This is a counselling interview with various briefs — a DP manager discussing with a systems analyst how to deal with a new application, a chief programmer calling in a member of the

Rory Judd

DOWNTIME



Marilyn

Kennedy-McGregor

Rory Judd

Icy train of thought

ONCE again, the British weather appears to have taken the country by surprise. The sheer blizzard of having snow storms and freezing temperatures in the middle of winter has resulted in blocked roads and the declination of rail services.

But the great British stiff upper lip triumphs in the face of adversity. While attempting to return to my country retreat on a particularly unpleasant Friday evening, it did my heart good to see that the commuting borders were unaffected by the atrocious failure of British Rail to supply their London termini with trains.

And the hardships of winter have started a new brand of one-upmanship that may bring cynical smiles at the next pay round.

Ringling around Df establishments, devoid as usual of the person I wanted to speak to or my second and third choices, I found that the excuse for their absence has gone upmarket.

Instead of being "tied up" in interminable meetings from which he or she will ring back, every other manager is "stranded on his train".

Were the brave travellers disheartened? Not a bit of it. Their normal composure remained unchanged, their rapier-like wit as sharp as ever.

One-seasoned traveller oxidized

Who'd know a computer?

IN a survey in which members of the public were asked to list classes of commercial road vehicles ranging from distant 4x4s to giant 150-ton earth movers, participants designated microprocessors as a jiggerate.

This begs the question: how many members of the general public could identify a computer? Should they chance to meet one?

I suspect that calculators and coffee makers and even heating thermostats would all be deemed to possess a tiny "brain".

On the other hand, the average man-in-the-street tends to bombard us with tales of American fictional flashes of super computers that can count the number of atoms in a pin while simultaneously singeing entire song cycles of Schubert's firing photon torpedoes at passing alien spacecraft, that is probably fail to recognise a mainframe if he saw one.

Reaction to the proposed Commodore emulators from some quarters has been one of doubt: that Commodore can carry out its plans to market them this year, or that such emulators can be made without infringing patents.

But that aside, what Commodore has done is to lay the way open for others to follow. It may beat the Japanese to it in demonstrating a machine emulating the IBM micro, but there can be no doubt that it will not be alone for long.

Like the universal car, each model doing much the same job with much the same components (and much the same software) the universal computer is just around the corner.

Next to the playful microsatellite passive mini-computer displaying the message ICL ME 29.

Perhaps the games software isn't ready yet.

Cutting out the rubbish

SAVINGS of £70 million on the £700 million annual bill for employing Britain's dustbins could be made according to a computer model built by the independent Local Authorities Management Services And Computer Committee (LAMSC).

The model calculates the optimum routes and methods of bin collection for medium-sized computers, currently estimated to be worth £75 million. A Westinghouse computer has been used to analyse the data collected.

I always thought that computers produced more rubbish than they helped shift.

No comment.

Sheffield Morning Telegraph

It is interesting to note that, to convince trade unions that labour costs are being calculated fairly, a simplified version of the package is available to them.

Does this mean that LAMSC considers its model too complicated for most trade unions to comprehend? Or, that the unions concerned believe that the two different packages perform their calculations in a different manner?

The 2000 programme is designed to act like a human being, and reading and talking to any language.

Computer Weekly

Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS

Thursday, January 21, 1982

LETTERS

Preparing for extinction

YOUR editorial A Doubtful Sort of Honour (CW, January 7) is an awesome reminder that some technologists are preparing for a war that may give us the distinction of being the last generation of humans beings.

Some recent editorials in Wireless World (Microchips and Megadevils, November 1980) have put the case more forcefully.

We are all aware of the myriad flaws that may creep into computer hardware and software and other related equipment. Physicists and biologists are aware of the terrible consequences of atomic warfare. However, the politicians and generals into whose hands the weapons are delivered are not in

many cases scientifically educated (eg Mr Reagan) and can only think in terms of a larger World War II.

If we have brains enough to design software and hardware for World War III we cannot (like many in Nazi Germany) shirk the responsibility for our actions.

Without scientists and technicians, politicians could not threaten mankind with nuclear, biological or chemical warfare.

I hope that those who receive the "doubtful honour" of work on ACCS or similar systems will use Computer Weekly to find themselves another job.

DAVID BAILEY

Charlesworth,
Cheshire.

Magnuson market share

THE article by Boris Sedacca (CW, January 7) throws further light upon the IBM plug compatible mainframe market — a newswothy and growing market segment. However, Derek Lewis' viewpoint differs from ours at Magnuson. Since our installed base exceeds that of Olivetti, it would appear to be in third position, at least, based in number of installed systems.

Whether Mitterrand's grand design for the computer industry will lead France to the forefront of information technology is doubtful. But there may be some lessons for the UK government in Gallic pragmatism and the nationalist approach to a computer industry.

In the UK we continue the debate on how much support should be given to our own computer developments, with the champions of free enterprise blanching at the mere suggestion of even indirect State aid. But as a marketing man responsible for winning a major government computer contract recently said, we have all been toeing the line to comply with GATT and EEC regulations on tendering, while other governments continue with their "enlightened procurement" policies.

In the UK the pallyhoo accompanying Mitterrand's nationalisation, the point should not be missed that the French computer industry, as with many of our other major competitors, is receiving real financial support. It did so under de Gaulle, it did so under Giscard d'Estaing and it is doing so now.

Over there it seems that whether the government is of the right or the left, some policies remain the same.

M. TUCKER
Managing director
Magnuson,
Henley-on-Thames.

from the TeleVideo family

New 925 giving a code compatibility with all the TeleVideo family plus a detached electric stylus keyboard featuring all the advantages of the 910, 912, 920.

There is no need to enclose this in a block, since the default action of IN (= INPUT) is to create a permanent file. The example chosen by the author is obtuse.

G. B. JUDD
London W10.

Learning for change

DESPITE the censorious tone of your editorial on my paper Learning for Change (CW, December 10), I believe that we are in full agreement on the main points: "New technology is a tool, not a panacea."

"Rather than worry about the dross of second rate institutions with university status, perhaps we should be putting more money into using technology to provide a better general education for everyone."

However, this may be strong meat for some of your readers and I would like to remind them that the full text of the paper is available from The Bow Group, 240 High Holborn, London WC1.

The Editor welcomes letters commenting on subjects published in Computer Weekly, or on original topics. All letters must be accompanied by the writer's name and address, not necessarily for publication. Letters may be cut.

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FOR FURTHER DETAILS, LITERATURE, INSTANT PRICE QUOT

Eric Watson takes over this week's page, and exhorts programmers to take a pragmatic approach to their work

Choose your language with care if Britain is to keep its place

IT is almost impossible to open any computer journal these days without coming across one or more letters or articles either praising some particular, generally new, computer language or denigrating an old one.

The general line followed is to state that the new language facilitates structured programming, presumably in contrast to the aimless programming which most of us produce, and allows the presumably happy programmer to do various things in a more elegant way than was possible with the old fuddy-duddy languages.

With respect, I suggest that this is a completely wrong approach. Indeed the slavish adherence to this, essentially academic, approach in the British computer world is probably the main reason why American computing, which was behind us in the late Fifties, caught up and passed us in the Sixties and Seventies.

In the sterner times in which we live today a more practical approach is needed if we are not to fall even further behind. No one computer language can satisfy all needs, any more than a single type of motor vehicle can satisfy all

never be needed.

The question of the minimum knowledge which is required before a useful program can be written is, I believe, fundamental in judging the value of a language. It is also one of the most neglected.

In assessing what may be called the "learnability" of any language it is necessary to consider both the verbosity of its statements and the amount of knowledge required before a program can be written at all. Otherwise it would be impossible to make a valid comparison between, say APL and RPGII.

The former, as we are often told, produces programs of quite astonishing brevity. This is true - the amount of pre-knowledge required before any APL program can be written is likely to prove daunting to anyone without a good grounding in mathematical symbolism.

Programming in RPGII, on the other hand, is likely to lead to physical exhaustion, owing to the large amount of textual material to be

entered, the amount of mental effort required being small.

The suitability of any language for a particular user will also depend on the facilities he or she requires. This was recognised in earlier days by the classification of languages as either "scientific" or "commercial". Unfortunately this wholly sensible practice seems to have been abandoned recently in favour of a policy of asserting that the latest wonder language is better in every respect than anything which preceded it.

I would suggest that the time has come when, instead of pursuing this sterile policy, those interested in improving the quality and quantity of computer usage should work towards improving the learnability of computer languages, by cutting out unnecessary complex constructs, classifying languages precisely according to the fields in which they are most efficient and aiming for conciseness in writing by throwing more

statements, the simple assignments, and the use of variable names will be necessary.

In Cobol it will be necessary

to know the names and functions

of the four divisions, while in like languages the whole basis of type declarations, power, beginning and end and basic termination must all be known first.

I appreciate that once all knowledge has been acquired it is possible to carry out all scientific calculations without further factual information. However, it is of little comfort to novice user who has to decide whether to do this wonderful thing. The availability of information of this nature before the user makes his choice will reduce the number of dissatisfied users and help avoid the situation which happened too often in the past whereby new features have been added to a language to meet the needs of those who should have been using it in the first place.

Similar considerations apply to the verbosity of a language. Once again the simple addition need supply a measure of its nature and serve to direct the user to the language most suitable for his needs. The final step, listing the features of the language, is generally done well enough already.

The first step, defining the area of work, should not present too much difficulty in principle.

The preliminary studies which led eventually to the development of Ada provide a useful example of what needs to be done, although I would not suggest that so detailed and exhaustive an effort is needed in every case.

The second step, listing the minimum knowledge which is required before any program can be written is not so difficult as it may appear.

An initial approach is to use the classic program which reads in two numbers, adds them together, and prints out the result. In a language such as Basic knowledge of the input and output

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The suitability of any language for a particular user will also depend on the facilities he or she requires. This was recognised in earlier days by the classification of languages as either "scientific" or "commercial". Unfortunately this wholly sensible practice seems to have been abandoned recently in favour of a policy of asserting that the latest wonder language is better in every respect than anything which preceded it.

I would suggest that the time has come when, instead of pursuing this sterile policy, those interested in improving the quality and quantity of computer usage should work towards improving the learnability of computer languages, by cutting out unnecessary complex constructs, classifying languages precisely according to the fields in which they are most efficient and aiming for conciseness in writing by throwing more

statements, the simple assignments, and the use of variable names will be necessary.

In Cobol it will be necessary

to know the names and functions

of the four divisions, while in like languages the whole basis of type declarations, power, beginning and end and basic termination must all be known first.

I appreciate that once all knowledge has been acquired it is possible to carry out all scientific calculations without further factual information. However, it

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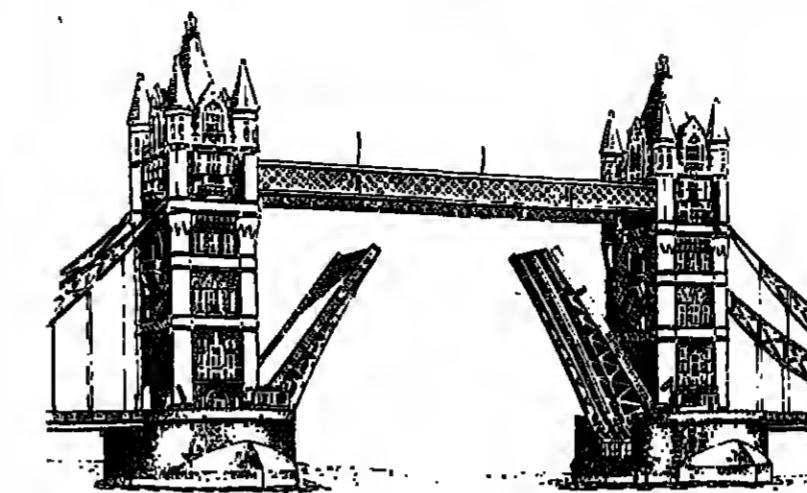
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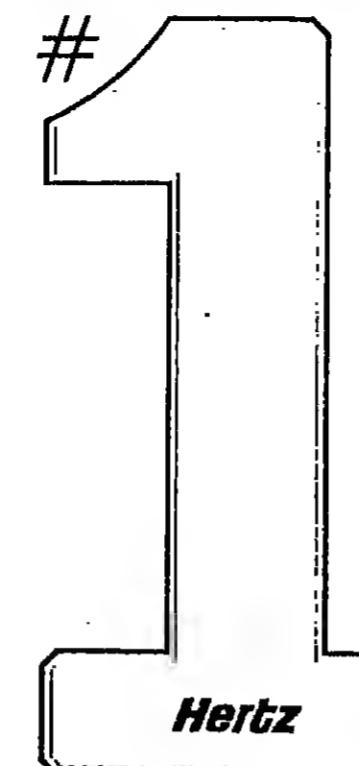
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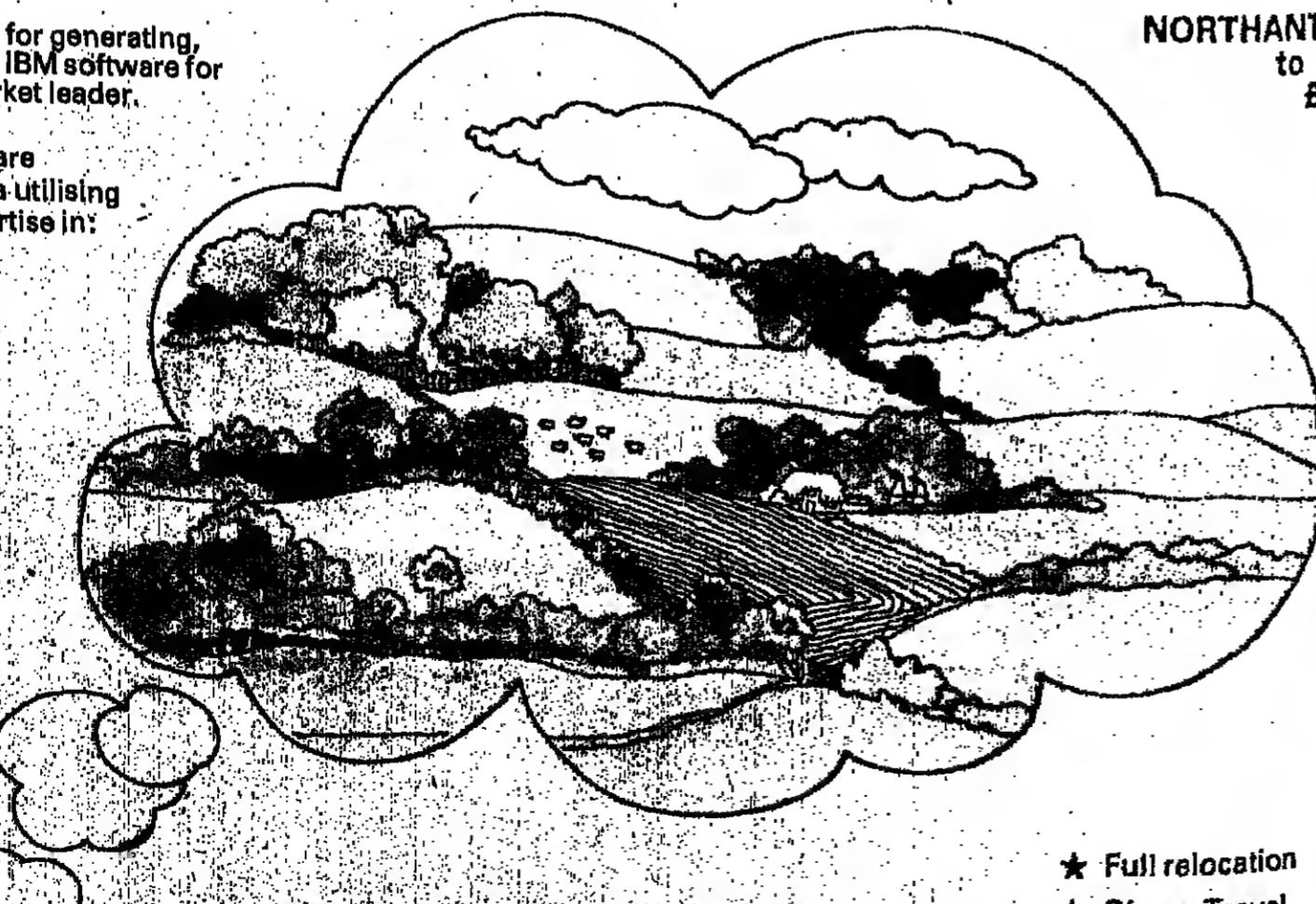
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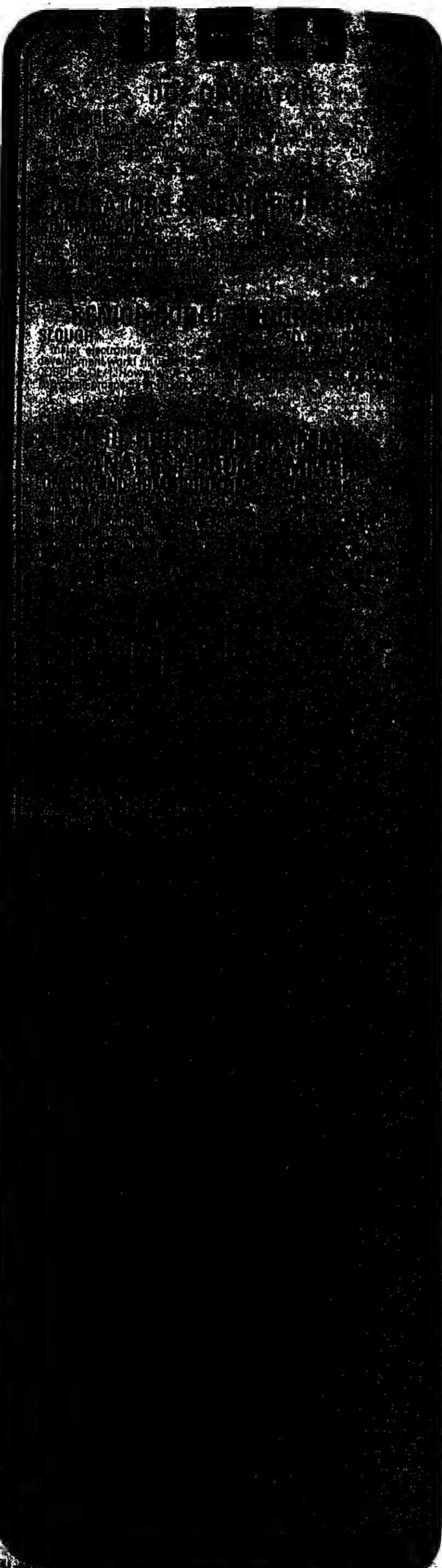
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An International Telecommunications Company is seeking Software Programmers to develop new Software for PUBLIC DATA SWITCHING SYSTEMS. Candidates should be in their mid to late 20s, have a degree, plus a minimum of 2/3 years' Assembler experience in a telecommunications environment. Alternatively candidates with operating systems experience would be equally valid. Successful candidates may look forward to enhancing their career progression, gaining valuable experience in an international environment.

Technical Author Switzerland

A Technical Author is required for a communications company in German-speaking Switzerland. The successful candidate must be in their late 20s, have a fair knowledge of German with hardware or software experience within an engineering background.

Technical Writer Italy

Our client seeks a Technical Writer to work in Northern Italy. The successful candidate must have communications experience including the following: IBM/SRA, SPOOLING & PDP11 operating systems.

SWITZERLAND

German-speaking Project Software Development

A major telecommunications company require additional German-speaking Programmers to develop a new Software communications system. Candidates should possess the following expertise:

- German language
- Assembly
- Process Control, Type Applications
- Real-Time Communications
- 2/3 year's experience
- Degree

Qualifying applicants may look forward to considerable career advancement, gaining vital experience in an overseas environment.

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SYSTEMS PROGRAMMER/ OPERATIONS MANAGER

with at least 3 years RSTS/E experience to wet nurse our new PDP11/44 installation. Experience in typesetting, text processing or word processing fields would be a distinct advantage.

Salary is negotiable and commensurate to the position offered.

Write giving full details to:
P. Watson (Managing Director)

Topset Typographics Limited
90-94 Clerkenwell Road, London EC1M 5TE

OPERATIONS MANAGER

N. LONDON
from £10K + CAR
Major company situated in North London area require an experienced IBM Operations Manager for their expanding OS/VS installations.

The successful applicant must have a mature outlook, together with a proven ability to liaise with development teams and all levels of management.

This position also involves some travel within the U.K.

For further details telephone:

01-834 6923 (Daytime)

or

01-834 0081 (24 hrs.)

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RECRUITMENT DIVISION
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VICTORIA, LONDON SW1P 1JU

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Applications are invited for the post of
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With responsibility for DEC and DEC/DEC Computer Courses. Candidates should possess a degree or other equivalent qualification in Computing, and have practical experience of use of computers in industrial/business situations. A teaching qualification is desirable.

Salary Scale: £5,452-£10,431 p.a.

Application forms and further information are available from the Principal, Monkwearmouth College of Further Education, Swan Street, Sunderland, SR3 1EB.

Closing date for applications: 3rd February, 1982.

borough of sunderland

Operations Manager

London Based

£10-13k.

C.I.S. is an English registered company based in London and Paris. Operating within a specialised application field, and including among its customers most major finance companies and a large number of motor manufacturers and importers, the company offers a complete range of turnkey, bureau and software development services.

C.I.S. uses N.C.R. MAINFRAMES, running various on-line applications including Voice Response Systems. To run the installation we are seeking to employ an OPERATIONS MANAGER who has experience of managing people and controlling a busy shift operation under pressure.

The successful applicant will have a sound knowledge of N.C.R. 8500 equipment, the VRX operating system and some experience of communications. The position provides an opportunity for the Operations Manager to steer the company through an equipment upgrade, and to establish standards and procedures to the highest possible level.

The position is a senior one within the organisation and applicants must have the ability to achieve efficiency improvements, meet production schedules, and maintain a good working relationship with suppliers, while maintaining a complete control over their standards of service. In return the company offers a high benefits package in a highly successful and rapidly expanding organisation. For further details contact Kevin McCourt quoting reference 5665.



**Lloyd Chapman
Associates**

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BOX NUMBERS

Box number replies should be addressed to:

Box Number.....

c/o Computer Weekly
The Quadrant
Button, Surrey SM2 5AS

SOUTH AFRICA PROGRAMMERS

Minimum 2 years experience in Cobol and/or PDP11 for IBM AMF preferably in an on-line environment.

Our client offers attractive salary, 13th cheque, pension and life assurance and can help with a representative in South Africa.

Telephone (010) 811 0888, Rand, Laufen NW2 8HJ. 01-45-9022

Senior Programmers/ Analysts

Can you help develop Large Scale Business Systems? One year contract package worth in excess of \$50,000

Our client is a Houston-based consulting firm serving the growth industries of oil and energy in the U.S. sun belt, for whose companies the continuing development of increasingly sophisticated systems is necessary if they are to meet their dynamic expansion plans in international markets.

As a result they have a heavy demand for DTP professionals, advising and leading programming teams in producing the software for new business systems.

Applicants should have at least five years' COBOL programming and design experience including data base exposure in supervisory or consulting positions for batch and on-line applications.

You should have used IBM's IMS techniques and on-line utilities such as ROSCOE and LIBRARIAN and a working knowledge of JCL would be welcome. Our client is looking for programme specification experience and proven expertise in the use of best current practice structured design techniques.

Initially contracts will be for one year or single status, renewable by mutual consent. However longer-term family status contracts or permanent assignments are anticipated.

High salaries and professional career opportunities are supplemented by a most generous benefits package which includes free accommodation, free transportation, free medical insurance, relocation and Visa costs paid, 25% Completion Bonus, and full assistance in settling in.

For further details please contact Elizabeth Piper or send your c.v. NOW to her at: Tel: (0922) 38717.

BUPA

Houston Texas

utilities such as ROSCOE and LIBRARIAN and a working knowledge of JCL would be welcome. Our client is looking for programme specification experience and proven expertise in the use of best current practice structured design techniques.

Initially contracts will be for one year or single status, renewable by mutual consent.

However longer-term family status contracts or permanent assignments are anticipated.

High salaries and professional career opportunities are supplemented by a most generous benefits package which includes free accommodation, free transportation, free medical insurance, relocation and Visa costs paid, 25% Completion Bonus, and full assistance in settling in.

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Are you fed up with applying for the same old jobs and find you are turning them down because you haven't got CICS experience? Well here is an ideal opportunity for you to change all that! Our client needs someone with two years' IBM COBOL to work in a small team. They are prepared to train in CICS and pay you an excellent initial rate. Interested? Of course you are. Call us for more information.

CALL LINDA ABL OR ELLEN WALDREN ON
01-404 4339 or 01-242 0076

SENIOR PROGRAMMER £9,500+

Our client is currently developing a large engineering system and requires someone with an excellent background in PL/I, exposure to CICS or TSO would be a definite advantage. Promotion prospects are excellent. Good benefits are unusual. If you feel you have gained in-depth experience in your present job and would like the opportunity of developing your skills, this is the opportunity you're looking for.

SCHMIDT

COMPUTER SERVICES

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SENIOR PROGRAMMER/ANALYST (DATA PROCESSING MANAGER DESIGNATE) CAMBRIDGE

Bidwells is a leading firm of chartered surveyors, managing property and farms through the country. Due to expansion and with a software house involvement we have recently installed a Data General Nova 4 System to upgrade and expand systems in our accounts and estate management operations. We now wish to appoint a Senior Programmer/Analyst to hand up and expand our computer function.

The successful candidate will be a Programmer/Analyst of at least 5 years' experience and will have developed systems using DG Business Basic. He or she is probably currently employed in a progressive DP environment or a software house, can show a record of successful systems, be self-motivated and able to communicate with assurance with all levels of management.

We consider this to be an appointment which will grow as our data processing needs develop. The position involves a wide range of tasks to ensure the efficient operation of existing systems and to recommend and effect the installation of new hardware and software in other areas of our business. We offer excellent conditions for our staff. Benefits include annual merit bonus. Relocation expenses will be paid. Local accommodation will be provided.

Please apply with full details of age, experience and present salary to:

J. T. Livingston Booth F.C.A.
Chief Accountant
Bidwells, Trumpington Road, Cambridge CB2 2LD

Data Communications Network Engineer

The development of the global telecommunications network has led to the requirement for an additional Data Communications Engineer to join the International Operations Department of American Express Corporate Telecommunications Services, based in Brighton.

Key responsibilities will be in an operations support role involving diagnosis and rectification of network outages, liaison with vendors regarding the maintenance and switching of data communications equipment and some network installation/reconfiguration work.

We are particularly interested in candidates, male or female, with experience of PTT, Radios Links and Codes Modems, multiplexers and allied devices. Experience with IBM systems hardware and line protocols would be an advantage.

An attractive salary is offered together with a one year's assistance scheme, non-contributory pension and group life insurance plans. Relocation expenses will be paid, where appropriate.

Please write giving career and salary details, or telephone for an application form to Mrs. Diana Sharp, Senior Personnel Officer, Corporate Personnel, American Express U.K.C., Prestatyn House, Preston Road, Brighton, Sussex, BN1 6BX. Telephone: 023555 Ext. 3029.

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We require an Analyst/Programmer to further extend and integrate our production control, financial and administrative systems. Applicants should have COBOL experience. CICS or TSO would be a definite advantage. Promotion prospects are excellent. Good benefits are unusual. If you feel you have gained in-depth experience in your present job and would like the opportunity of developing your skills, this is the opportunity you're looking for.

Salary will be subject to experience and qualifications, but is unlikely to be less than £7,500.

Please apply in writing enclosing CV to:

Mr. J. Duncan
Director
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Your opportunity in the sun. Join one of South Africa's most sophisticated computer installations.

CONTRACT OR PERMANENT

Our Client, Intogold, is the Information Systems Department of the Gold and Uranium Division of the Anglo American Corporation. They are looking for:

SOFTWARE PROGRAMMERS DATA BASE ANALYSTS ANALYST PROGRAMMERS PROGRAMMERS

Situated in the country the installation presently has on IBM 3033 and on IBM 3032 with South Africa's first IBM 3081 being installed early this year. In addition, they have a wide range of mini computers at remote sites. They use the latest software tools, including IMS data base and data communications.

They are looking for genuine DP professionals at all levels who already have a minimum of two years' experience in the industry. Education and training is given top priority and the true data processing professional need not necessarily have a background with IBM equipment.

South Africa has much to offer—a booming economy, sunshine, low taxation and high living standards. The employment package offered by Anglo American is generous, even by South African standards, and includes:

- Top salaries plus a car for senior positions.
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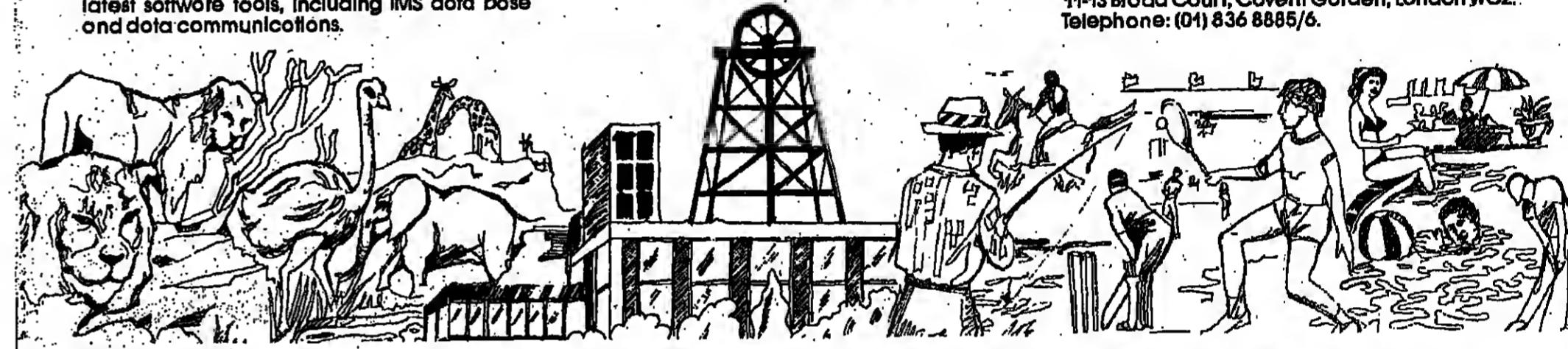
- Housing at 5% of the basic salary.
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- Four or five weeks' leave per annum.
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- Superb sports and social facilities.

This is an ideal opportunity to combine career progression, experience in a new country and a real possibility of saving.

Final interviews will commence in London on 22nd February.

For further information please contact Anne Breuer or Chod Stolper on (01) 836 8885/6 or, if you prefer, write to:

PRESOT COMPUTERS LIMITED
11-13 Broad Court, Covent Garden, London WC2. Telephone: (01) 836 8885/6.



PROGRAMMER NCR COBOL

International financial organization requires a programmer with NCR Cobol and IMS experience. Any exposure to IBM RPG/11 would be useful. This is an excellent opportunity to join a rapidly expanding D.P. department and become involved in a variety of systems and hardware with the possibility of some overseas travel. Usual banking perks are offered.

£8,000

JNR PROGRAMMER RPG11

Subsidiary of a multi-national corporation require 2 Jun for Programmers with at least 6 months commercial RPG/11. Excellent career path with rapid progression through to analysts. This is a good opportunity for a skilled programmer to move into a small and professional team.

£7,000

ANALYST & PROGRAMMERS £11,500 DG COBOL

A well-established bureau currently embarking on new projects requires various levels of staff from Programme to senior analyst/programmers. Knowledge of DATA GENERAL NOVA under ICOS is essential for the more senior positions whilst a good commercial COBOL background would be suitable for the programmer post. Based in Central London, this client offers good working conditions and excellent career prospects.

SYSTEMS PROGRAMMER BURROUGHS ALGOL

A large company whose interests are well known are currently looking for an experienced systems programmer to join their specialist team on a wide variety of applications. A minimum of 3 years' experience utilising MCP and datcomms with the emphasis on datcomms is required with extensive use of algol. Any knowledge of Cobol would be useful. A good relocation package is offered to this site in Surrey. This requirement is urgent.

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SENIOR PROGRAMMER BASIC/+/-2

At least 2 years' Basic+ with some Basic+2 is required in a large City area. As well as programming ability applicants must be able to manage junior staff. All programming staff are encouraged to gain early involvement with analysts since there are no analyst/programmers.

£9,500

PROGS & ANALYST/PROGS. £11,000 IBM COBOL

At the end of 1981 and the beginning of 1982 we have identified numerous and various requirements in the IBM sector. All the sites are mainly Cobol orientated but any PL/I knowledge would be an advantage. One C. London user has recently installed two IBM 4341 machines and now wishes to expand their development team substantially. The posts range from programmers, with 1 year's Cobol, to Analyst/Programmers, with around 3 years' experience. Preference will be given to applicants with some knowledge of CICS or similar real time system although training will be given where necessary. This is a typical C. London requirement but there are many other sites recruiting in other parts of London and the Home Counties.

SENIOR PROGRAMMER HONEYWELL

Manufacturing company based in Middx. using a LSI DPS mainframe currently seeking to recruit a programmer with 3 years'+ Cobol experience. Knowledge of TDS is desirable as the company is expanding and adopting all the latest software releases. Perks are excellent and include 6 weeks' holiday and 50% discount on company products.

£9,500

PROGRAMMERS HP COBOL

Senior and junior programmers are required by sites in C. London and the Home Counties. Applicants should have from 1 to 4 years' experience preferably gained in an H.P. environment. These positions are with progressive companies offering excellent career prospects and a variety of perks including mortgage subsidy, travel allowance etc.

£11,500

PROGRAMMERS IBM ASSEMBLER

2 Central London financial installations are seeking to recruit experienced IBM Assembler Programmers to complement their existing teams. Applicants should have a minimum of 1 year's experience gained in any commercial environment. Knowledge of CICS would be useful however training will be provided where necessary. Both companies offer secure positions with good career prospects and a wide range of benefits including mortgage subsidy.

This is just a small selection of current requirements. For details of these and others not advertised contact us now.

PROGRAMMER ICL COBOL

Expanding City based installation seeks a programmer with around 2 years' Cobol experience gained on the ICL 2900 range. The preferred applicant will have both on-line and database experience with a good commercial background. The company is shortly installing new hardware and can offer excellent career prospects and perks including a substantial bonus scheme.

£9,000

PROGRAMMERS IBM ASSEMBLER

2 Central London financial installations are seeking to recruit experienced IBM Assembler Programmers to complement their existing teams. Applicants should have a minimum of 1 year's experience gained in any commercial environment. Knowledge of CICS would be useful however training will be provided where necessary. Both companies offer secure positions with good career prospects and a wide range of benefits including mortgage subsidy.

This is just a small selection of current requirements. For details of these and others not advertised contact us now.

PROGRAMMER

£9,000

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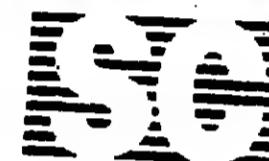
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+ CAR**

**Johannesburg
South Africa**

flexibility in how a remuneration package can be constructed and tailored to suit all manner of personal requirements.

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Manchester 061-833 0427 Blackfriars House, The Parsonage, Manchester M3 2JA.
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You will need the experience and ability to manage a large development group using structured programming techniques, I.M.S. and database.

To be responsible to the programming manager for one or more programming teams. You must have 2 years experience of managing in an IBM mainframe development environment, structured programming techniques desirable.

To supervise a team of programmers in the support, development or enhancement of one or more computer systems. You should have been closely involved in programming for at least 5 years with experience of IBM 370, MVS, IMS, TSO and COBOL.

Applications are invited from Analysts with experience in feasibility studies, systems design and user support.

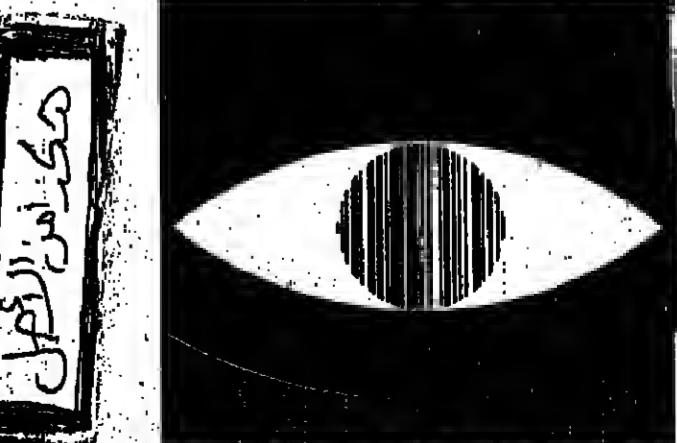
In addition there are vacancies at various levels for Analysts, Analyst/Programmers, Job Control Technicians and also for Operators with IBM mainframe experience. Why not telephone for further information?

The salaries shown will have given you some idea of our belief in rewarding effort - and there are other big-company benefits, too, including relocation expenses (where appropriate) to our Cheshunt Headquarters. It's attractively rural, yet within easy reach of London.

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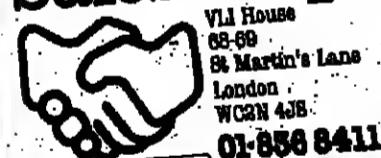
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6 x Analyst/Programmers COBOL, IMS, CICS circa \$35,000

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pleasant social scene
pay in both U.K.
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26 x Programmers, Systems Programmers and Database Designers \$30,000 to \$42,000

We are recruiting a 26 person project team for the development and implementation of on-line database systems on an IBM 3381 MVS mainframe in Connecticut. Assignments are for 6 to 12 months and we require the following specific skills: MVS COBOL programmers, IMS/CICS programmers, VM Software programmers, FOCUS, IFP/SAN, MVS and DB2 database programmers, IMS Database designers and administrators.

If any of those positions interest you, Ring Mary Coleman or Lynne Lawes on 01-836 8411 (24 hrs). Interviews with our U.S. clients will take place in the next four weeks.

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£10,500
+ Benefits

A minimum of 2 years IBM COBOL is necessary to join this totally new installation. The company utilise a new IBM 4341 with an SNA network serving 17 branch offices. Systems are on-line and an extensive database development is under way.

REF: MB

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with main frame responsibility to
£10,500 p.a. plus
Subsidised
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2 years + experience with IBM Assembler and/or PL1 knowledge of technical Systems design or distributed process Systems desirable. Modern offices and first class benefits package.

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£10,000 + Subsidised
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Programmer required with a minimum of 18 months commercial experience of IBM ASSEMBLER or COBOL. Full re-training in CICS will be given to successful candidates. Installation comprises 2 x IBM 3031 and 4341, running under DOS/VSE, DL1 and CMS are used extensively. The company will train ambitious candidates in ON-LINE and DATABASE techniques.

REF: MB

PL1 & ASSEMBLER PROGRAMMERS

£10,000 + Subsidised
Housing

The company is part of a major Banking organisation. They require PL1 and Assembler Programmers of varied experience. The configuration comprises IBM 3031 and 4341, running under DOS/VSE and Power/VSE and making extensive use of CICS and BTAM.

REF: MB

Shuter Smith Associates
28, Berkeley Square, London, W1.



Call
01-491 4653

System 34 Senior Analyst/Programmer

- RPGII
- Analysis - MAAPICS
- GFAS

c.£12,500
North Surrey

We are seeking an experienced RPGII Analyst/Programmer who is ready to take on the installation and development of Maapics and GFAS for a new IBM System 34.

The ideal candidate will need previous involvement in analysis to be capable of identifying and solving production and accounts systems problems. The person appointed will take full responsibility for the installation and will report to the Financial Director.

We are a medium sized specialist manufacturing company and part of a major industrial group. As well as offering a realistic salary and normal benefits, relocation assistance is available.

To apply, please telephone 01-686 9693 (24 hour answering service) or write to Nick Foulser quoting ref: CW100-2F at Capp Associates whom we have retained to act on our behalf.

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ASSOCIATES**

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Computer and Professional
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Specialist Offshore Design Company require a Computer Systems Manager to install and supervise a Computer-Vision CAD's 4, 3D computer-aided graphics system. Successful applicant will command a salary of not less than £20K/enum (Negotiable).

Ring Mike Bryant, of
BRYANT TECHNICAL APPOINTMENTS
on 01-881 0300
Please use answering service if necessary

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SOFTWARE/HARDWARE ENGINEER for the Production Planning Group of a multi-national computer manufacturer. Work will entail hardware performance testing, hardware/software interfacing, evaluation and test. Experience of microprocessors essential, ideally with a knowledge of BASIC and PASCAL. Spoken German required.

Location: Vienna

Rel: 18/82

SOFTWARE TECHNICAL AUTHORS:

1. With experience of writing END USER Documentation for a new range of micro processors and related software currently being developed. Knowledge of PASCAL and BASIC.

Location: Vienna

Rel: 28/82

2. To write software User Manuals for a new micro processor based development and debug system, from engineers performance specifications. Applicants, preferably with a Degree or similar in a numerate subject, should show a knowledge of PASCAL, with BASIC or ASSEMBLER and a strong software writing background.

Location: The Netherlands

Rel: 38/82

DATA ENTRY CLERK/KEYBOARD OPERATOR (or Trainee Programmer required to edit/print translated screen and print out text etc. Knowledge of modern language(s) essential).

Location: Vienna

Rel: 48/82

TECHNICAL AUTHORS/TRAINING OFFICERS with a background in Process Control and computer engineering to write the systems documentation for a new Analogue/Digital multi-function mini computer based process control machine, and train users and service engineers on the equipment. A knowledge of hardware and software in such an environment, together with spoken German is required.

Location: Germany

Rel: 58/82

HARDWARE TECHNICAL AUTHORS required to write FIELD SUPPORT, MAINTENANCE and Programming manuals from engineers draft specifications. Applicants must display considerable experience of mini computer peripherals.

Location: Germany

Rel: 68/82

SYSTEMS PROGRAMMER with 3 to 4 years experience to join an existing team. Responsibility will be held for implementation, maintenance and tuning of all IBM operating systems and software. Hardware is an IBM 4341 running under DOS/VSE. Applicants will have experience of VM/CMS, CICS, with a knowledge of Assembler and Fortran.

Location: The Netherlands

Rel: 78/82

PROGRAMMERS & ANALYSTS with IBM 4300 running under DOS/VSE experience. Knowledge of COBOL, Assembler, PL/I, Fortran, DL/I and CICS for various commercial and technical applications.

Location: The Netherlands

Rel: 88/82

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UNIVERSITY OF LIVERPOOL

Chair of Computer Science

Applications are invited for the above Chair which has been established as a new separate Department of Computer Science. The successful candidate will be expected to take a leading role in developing the department and its postgraduate activities in the University. He will also be expected to undertake and encourage post-graduate research and teaching in computer science.

The salary will not be less than £12,000 p.a. plus £12,000 p.a. for allowances. Applications (12 copies), together with the names of three referees, should be received not later than May 1982, by the Secretary to the University, The University, P.O. Box 474, Liverpool, L69 3BX, from whom further information may be obtained.

(Candidates currently employed elsewhere should do so, may send one copy by air-mail). Quota ref: RV/828/CW. (8171)

ROBOTICS RESEARCH AT U.C.L.

Applications invited from Mechanical Engineers with experience in microcomputer programming to work with a robotics research group on the design and development of industrial robots. Candidates should have good honours degrees in mechanical engineering and either a Ph.D. or minimum three years' industrial experience. Post holders will be supported by SERC and will be for one year. In the first instance: Salary scale IA £7442-£7947 inclusive. Applications with c.v. and names of two referees to:

Dr. W. K. Taylor, Department of Electrical and Electronic Engineering, University College London, Torrington Place, WC1E 7JE.

(8171)

COUNTY ENGINEER'S DEPARTMENT

Systems Engineering Section

Applications are invited for the following posts within the Systems Engineering Section of the County Engineer's Department. The successful applicant will take a multi-disciplinary team responsible for the design, operation and maintenance of a number of computer-based control systems, including a large multiprocessor Wide Area Traffic Control System.

SENIOR SYSTEMS ENGINEER

(HARDWARE)

£8,190-£9,528 p.e.)

Applicants must be Chartered Electrical/Electronics Engineers and have at least five years' practical experience in the design of real-time computer-based control systems. Additionally, applicants should have some experience of C.C.T.V. and V.H.F.-U.H.F. Radio systems.

SENIOR SYSTEMS ENGINEER

(SOFTWARE)

£8,190-£9,528 p.e.)

Applicants must be Chartered Electrical Engineers and/or M.B.E.C., with at least five years' real-time system design/programming experience. Postholders will be supported by SERC and will be for one year. In the first instance: Salary scale IA £7442-£7947 inclusive. Applications with c.v. and names of two referees to:

Dr. W. K. Taylor, Department of Electrical and Electronic Engineering, University College London, Torrington Place, WC1E 7JE.

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Please quote Ref. 8/30 in all correspondence.

Merseyside County Council

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NORTH & SCOTLAND

- Systems programmer - IBM 3031, 3033
- Senior programmer - ICL COBOL VMEB IDMS
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These represent a small selection of the opportunities currently available for permanent and contract staff. For more details on these and a wide variety of other vacancies contact **VAL LACKENBY** on 021-632 5111.



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Department of Computing Services

Three posts are available in the Department of Computing Services which provides a general computing service to the Polytechnic on a OEC2060, POP140 and various microcomputers. The major languages are FORTRAN, BASIC, and COBOL and major packages include SPSS, NAG, GENESYS and GINO-F.

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(PO1 4-8 - £8800 - £10,228)
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Further details and form of application available from The Assistant Director (Administration) Trent Polytechnic, Burton Street, Nottingham NG1 4BU.

Forms to be returned as soon as possible.

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is a national account dealer for Apple Computer UK Ltd and a Level 1 service dealer, marketing the world famous Apple II and III personal computer systems. In addition, Roccon Ltd is a dealer for many of the peripherals associated with Apple units, has hardware and software departments offering the customer a wide range of services ranging from in-house maintenance through to tailored software. Due to expansion, Roccon Ltd are currently seeking successful self-starters in the following fields:

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ENGINEER with experience of microcomputers and peripherals. Driving licence required. Salary negotiable according to experience.

Applications providing details of qualifications and career to date should be sent to: K. J. Denehy, Managing Director, Roccon Ltd, Radley Road Industrial Estate, Abingdon, Oxon.

UNIVERSITY OF LONDON COMPUTER CENTRE

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The Network Support Section is responsible for day-to-day operation of this extensive network. The unit includes the identification, analysis, resolution of technical and operational problems, delivery of test equipment and technical publications, maintenance agencies and personnel at other major installations, and the maintenance of remote administrative systems that contribute to the management of the School, Institution and community. New telecommunications equipment is also under development in long term planning.

A vacancy exists at a senior level and applicants invited from candidates with a sound technical ground in telecommunications or electronics. Candidates should preferably be educated to HNC, HND or equivalent standard, but other comparable qualifications will be considered.

The starting salary will be in the range of £20,000 p.a. approximately depending on age, experience and relevant experience.

Application Forms are available from:
The Assistant Secretary, ULCC, 20 Gulliford Street, London WC1N 1DZ. Telephone No. 01-405 9802. Applications close 5th February 1982.

ANALYST PROGRAMMER DORSET - With sole responsibility for systems and programming

South Westland Farmers is a successful farming co-operative with an annual turnover in excess of £130 million operating 120 farms of arable, dairy, sheep and cattle. We are currently the principal computerising number of major clients on our Dataflow System. Our Head Office is Dorset. These systems include analysis, reporting, data entry, inventory control and management reports as well as child systems using terminals in our depots. We need one Analyst Programmer to help install and develop these systems and to provide guidance and assistance both to and senior staff on all aspects of computerisation.

Applicants will probably be 24 years plus and have had systems and programming experience, preferably in batch systems and COBOL. Although the position is based at Dorset, some local travel will be required during the implementation of these systems.

Please write, enclosing a CV giving brief details of experience and present job to:

THE FINANCIAL CONTROLLER
South Western Farmers Ltd
Unity Chambers, Dorchester, Dorset, DT1 1HE

TEESSIDE POLYTECHNIC COMPUTER CENTRE

Teesside Polytechnic is a specialist centre of computing in education. The College has a staff of 40 and operates a large mainframe and a wide range of applications are invited for the following three areas:-

SYSTEMS PROGRAMMING MANAGER

Reference Number P.CU.01

This is a key post involving both management and technical responsibility, and requires a degree in Computing or Mathematics.

PROGRAMMER ANALYST/SENIOR PROGRAMMER ANALYST (2 POSTS)

Reference Number P.CU.02

One person to run the Graphics and Communications Group in developing and applying graphics and communications advances.

The other to join the Operating Systems and Computer Group in developing and applying systems software within the University of the Printed Page.

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• Application for two posts for all three posts are available from:

The Personnel Section, Teesside Polytechnic, Teesside, Middlesbrough, Cleveland TS1 3NA. Telephone: 0642 219121, Extension 2114.

Closing date for applications: 28 February 1982.

NEW COMPUTER DEVELOPMENT PRESCRIPTION PRICING AUTHORITY NEWCASTLE UPON TYNE

The Authority is developing a Computer Pricing and Information system capable of processing and analysing 350 new National Health Service prescriptions received each year. There are over 10,000 contractors. Currently 2,000 staff are employed to process this work manually in nine centres situated in Great Britain.

The existing Computer Division is expanding its staff to procure and implement 1,500 data entry terminals, mini-micros, and the Computer Pricing System throughout the country.

The first delivery of hardware has recently been received and includes a Honeywell Level 84/DPS - 4 computer, using COBOL we require:

SYSTEMS DESIGNER/PROGRAMMERS

(Procurement and Applications Programming)

Salary scale £26884 - £28147

Subject to certain conditions and previous experience an allowance of £250 p.m. can be paid on all posts of the scale.

Application forms and further details are available from the Personnel Officer, Prescription Pricing Authority, 122 Northgate, Newcastle upon Tyne NE1 1EW. Closing date 28 February 1982.

Account Manager Education/Government

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8233

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[8213]

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[8233]

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SALES BIT

Make sure you sell to the decision-maker

A FEW weeks ago I spoke to a salesman who was rather distressed and disappointed due to the loss of a major sale, which he had been absolutely confident of securing. It appeared strange for him to find a high level of personal credibility with the principal executives of the company.

He had a particularly clear understanding of the company and its needs, as he had been an employee of the organisation concerned, and he knew that his product had a variety of meaningful advantages over his competitors - yet he lost the business!

Most of the books and training courses that deal with the process of selling either state or imply that the ultimate decision-maker is the managing director, so he is the one to whom the sale must be made.

This is a misleading assumption which is not true in most circumstances. The chances of the managing director being the absolute decision-maker usually grow as the value of the proposition increases, and decline the larger the organisation he is controlling.

For instance, the managing director of a small service company buying a new phonocopier is likely to decide personally on the actual machine to be purchased, whereas the managing director of a major corporation will merely "rubber stamp" the decision of a subsidiary or division to invest several hundred thousand pounds on a new computer.

On the other hand, it would be a serious mistake to exclude the managing director from the selling strategy of any prospective sale of significant value, for in most cases he is likely to have influence upon the decision-making process, as have his fellow directors and

senior executives.

The important distinction to make is between the "influence" "decision-maker" and the singular "decision-maker".

Sales training often

comes across the

"ultimate deci-

sion-maker".

It implies that the

management will always

be at the top of the

pyramid.

This is not the

case. There is a

that a referen-

cating director is not

the salesman's peer.

But this is not the

case. Some people react

pressure from the

taking it as a ques-

tion of their own abil-

ity to make a de-

cision.

They then

prove their capa-

independence by

such recommendation.

If sales success is

achieved, it is emi-

nally obliged actually

the decision and the

situation through his

his direct superior.

Very rarely will any

of any work influ-

upon a customer

do so effectively

away from the de-

cision-maker responsi-

lity related to the

me still.

Alan Wilton

Influenced by all means, let

allow this to act as

guide for selling to the

decision-maker.

Incidentally, Computer Weekly has had several

from anxious readers

interpreting the de-

marks of my colou-

week as being de-

contribution. Not

There's plenty of room

me still.

Alan Wilton

planned for the third

of this year. The in-

ductory course leav-

is held in January,

July and October at

£450. Details of all

other Fortec cours-

Ruthie Alexander

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on, Stage II, pro-

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1982

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1984

1985

1986

1987